



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,671	03/18/2004	Timothy G. Offerle	81095823FGT1905	2670
28549	7590	07/01/2008	EXAMINER	
Dickinson Wright PLLC			TO, TUAN C	
38525 Woodward Avenue				
Suite 2000			ART UNIT	PAPER NUMBER
Bloomfield Hills, MI 48304			3663	
			MAIL DATE	DELIVERY MODE
			07/01/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/708,671	OFFERLE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	TUAN C. TO	3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 02 April 2008.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 2-14 and 27-35 is/are pending in the application.  
 4a) Of the above claim(s) 2-14 and 33-35 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 27-32 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 26 April 2002 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____.	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 27 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (US 20030156045A1) and in view of Bedner et al. (US 20020198646A1).

Regarding claim 27, Tanaka et al. directs to a system/method of controlling an automotive vehicle comprising: a shift lever having a reverse position generating a reverse position signal when associates with the parking assist ECU (2) (Tanaka et al., page 2, paragraph 0032; figure 1), the parking assist ECU (2) acts as a controller coupled to said shift lever, and the parking assist ECU (2). The ECU (2) receives the input signal from shift lever. However, the ECU (2) is not disclosed as applying brake-steer in response to the reverse position signal.

The second reference to Bedner et al. discloses a vehicle control system in which the control unit (26) receives variety input signal from wheel speed sensor (paragraph 0010), yaw rate signal, and steer angle signal (figure 1). The brake actuator (20), front steer actuator (22), and rear steer actuator (24) receives control signals from the control unit (26). The brake actuator (20) includes anti-lock braking (ABS) and a built in wheel speed sensor. Such the ABS helps driver maintain steering ability and avoid skidding while braking. Further, both braking and steering are control by the control unit (26). Therefore, the control unit (26) applies brake-steer in response to the wheel speed signal, yaw rate signal, steering angle signal, brake input signal. Bedner et al. merely fails to include a shift lever that provides the reverse position signal to the control unit (26), however, such feature is inherently included since the vehicle should include a shift lever for control driving forward or backward.

“The combination of familiar elements according to known method is likely to be obvious when it does no more than yield predictable results.” (See KSR Int’l v Teleflex Inc.)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the familiar vehicle system of Tanaka et al. with the vehicle system of Bedner et al. because it does no more than yield predictable results of effectively controlling the stability of vehicle when the driver operates the vehicle into a parking lot.

As to claim 32, Tanaka et al. further discloses "a steering wheel angle sensor generating a steering wheel angle signal, said controller programmed to apply brake-steer in response to the reverse directional signal and the steering wheel angle signal (Tanaka et al., figure 1, steering angle sensor 9).

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (US 20030156045A1), Bedner et al. (US 20020198646A1), and in view of Spillane et al. (US 20030200016A1).

Tanaka and Bedner et al. do not disclose a transfer case having a transfer case mode, and said controller that controls to change the transfer case mode based on the braking system (50 and the steering system (40) (paragraph 0072).

Spillane et al. has been provided as teaching a vehicle control in which the transmission controller (30) (figure 1) controls the mode of the transfer case (21) (paragraph 0071).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system/method as taught by Tanaka et al., and Bedner et al. to include the teachings of Spillane et al. to control the distribution of drive

torque between the front and rear axles, and the rear differential so as to control the distribution of drive torque between the two rear wheels.

Claims 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (US 20030156045A1), Bedner et al. (US 20020198646A1), and further in view of Ritz et al. (US 200200060103A1).

Regarding claim 29, Tanaka et al. and Bedner et al. fails to teach “controller is programmed to apply brake-steer by applying a first brake and second brake, one brake at a first wheel in order to reduce the turning radius of the vehicle.

The reference to Ritz et al. has been cited as teaching a vehicle, in which the control system is equipped with the controller (23) (Ritz et al., figure 1, control section 23) for activating steering-supporting braking torque (brake-steer) generated on the wheel inside the curve and a brake is applied to a first wheel (2<sub>HL</sub>) (Ritz et al., figure 1, brake is applied to left rear wheel 2<sub>HL</sub>; page 3, paragraph 0031). The first brake is applied and also the second is applied (Ritz et al., page 2, paragraph 0017).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system/method as taught by Tanaka et al. and Bedner et al. to include the teachings of Ritz et al. in order to bring the vehicle driver a comfort of driving and a safety of moving when the vehicle is controlled to back up.

As to claim 30, Ritz et al. further teaches that the controller (23) is programmed to apply brake-steer by applying at least one brake at a first wheel to reduce a vehicle turning radius (Ritz et al., figure 1, paragraph 0031, braking is applied at the first wheel (2<sub>HL</sub>) in order to reduce vehicle turning radius).

As to claim 31, neither Tanaka et al. Ritz et al. addresses the limitation “the control is programmed to apply brake-steer by applying an increased drive torque to a second wheel relative to the first wheel”, however, while the reference to Ritz et al. teach the vehicle equipped with a controller (23), wherein said controller is inherently controlled to increase drive torque to a second wheel relative to the first wheel (Ritz et al., figure 1, the torque  $M_B$  of the front left wheel increased to compare with torque  $M_B$  of the rear left wheel).

### ***Response to Arguments***

The applicant's remarks regarding to the rejection of claims 27-32 has been fully considered, however, claims 27-32 cannot be patentable over the cited prior art.

Regarding claims 27, and 32, Tanaka a vehicle system/method including a parking assist device for assisting parking. The parking assist device (1) as taught in Tanaka comprises a shift lever having a reverse position generating a reverse position signal when associates with the parking assist ECU (2). The ECU (2) is not disclosed as applying brake-steer in response to the reverse position signal. The second reference to Bedner et al. teaches a vehicle control system in which the controller (26) applying brake-steering in response to the input signals from wheel speed sensor, yaw rate sensor, or brake input. The controller (26) controls both the brake and the steering of the vehicle (see paragraph 0009, lines 19-24) in according to said input signals. Bedner et al. does not include a shift lever that provides the reverse position signal to the control unit (26), however, such feature is inherently included since the vehicle in Bedner et al. is necessary to include a shift lever for control driving forward or

backward. For the missing feature of Bedner et al., the first reference to Tanaka comprises the teaching of shift level for providing the input position signal to the control unit (2).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the familiar vehicle system of Tanaka et al. with the vehicle system of Bedner et al. because it does no more than yield predictable results of effectively controlling the stability of vehicle when the driver operates the vehicle into a parking lot (see KSR Int'l v. Teleflex).

Regarding claim 28, Tanaka and Bedner et al. fails to disclose a transfer case having a transfer case mode, and said controller that controls to change the transfer case mode based on the braking system (50) and the steering system (40) (paragraph 0072). The examiner has recognized the cited reference to Spillane et al. discloses a vehicle control of a vehicle in which the transmission controller (30) (figure 1) controls the mode of the transfer case (21) (paragraph 0071). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the

system/method as taught by Tanaka et al., and Bedner et al. by substituting the teachings of Spillane et al. to the system of Tanaka et al. and Bedner et al. in order to control the distribution of drive torque between the front and rear axles, and the rear differential so as to control the distribution of drive torque between the two rear wheels.

Regarding claims 29-31, claims 29-31 are remained rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (US 20030156045A1), Bedner et al. (US 20020198646A1), and further in view of Ritz et al. (US 200200060103A1). Tanaka et al. and Bedner et al. fails to teach “controller is programmed to apply brake-steer by applying a first brake and second brake, one brake at a first wheel in order to reduce the turning radius of the vehicle”. Ritz et al. discloses a vehicle comprising a vehicle control system comprising the controller (23) for activating steering-supporting braking torque (brake-steer) generated on the wheel inside the curve and a brake is applied to a first wheel (2<sub>HL</sub>) (Ritz et al., figure 1, brake is applied to left rear wheel 2<sub>HL</sub>; page 3, paragraph 0031). The first brake is applied and also the second is applied (Ritz et al., page 2, paragraph 0017). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system/method as taught by Tanaka et al. and Bedner et al. to include the teachings of Ritz et al. in order to bring the vehicle driver a comfort of driving and a safety of moving when the vehicle is controlled to back up.

For the forgoing reason, the application is now set in a condition of final rejection.

***Conclusions***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan C To whose telephone number is (571) 272-6985. The examiner can normally be reached on from 8:00AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Tuan C To/  
Acting Examiner of Art Unit 3663/3600  
June 17, 2008